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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,096	12/10/2001	Seung Ho Chang	054216-5010	6009

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EXAMINER

YOHA, CONNIE C

ART UNIT PAPER NUMBER

2818

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/006,096

Applicant(s)

HO CHANG, SEUNG

Examiner

Connie c. Yoha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Examiner took notice of the remarks and amendments made by applicant filed on 6/26/03.
2. A second non-final rejection is applied to the pending claims. No reference has been applied at this time due to the 112 rejections problems addressed below.  
Examiner needs further clarification before further examining the pending claims.

### ***Response to Amendment***

3. This office action is in response to the response filed on 6/26/03.
4. Claims 1-6 are pending.

### ***Claim Rejections - 35 USC § 112***

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear and is confusing to the examiner what is it meant regarding to the limitation of claim 1, line 6-11, " a second level program step of, after a first program voltage is applied to word lines, turning off the sensing circuit to maintain a threshold voltage at a first level voltage when the data stored in the register is a first memory cell being a first data". For instant, is "a data storing step of storing data" limitation considered the first level program step. If it is not, the limitation of "a second level program step" cited on line 6 of claim 1 must be proceeds by a first level program step. Furthermore, examiner is confused and cannot understand what is

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meant by the limitation of "turning off the sensing circuit ... when the data stored in the register is a **first memory cell being a first data**" in line 7-9 of claim 1, similarly with line 14-16, 20-22 of claim 1. Examiner wants to point out that in the semiconductor art, data is not a cell, so the conditions set forth in the claim cannot be understood.

Claims 2-6 is dependent of claim 1, therefore, they are also being rejected for the same reasons set forth above.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation of "performing a program to raise the threshold voltage to a second level when the data stored in the register is a remaining memory cells is other than the first data" stated on line 9-11, 16-18, 23-25 of claim 1 can not be found described in either the specification or in any of the drawings diagram.

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Claims 2-6 is dependent of claim 1, therefore, they are also being rejected for the same reasons set forth above.

### ***Drawings***

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, The limitation of "performing a program to raise the threshold voltage to a second level when the data stored in the register is a remaining memory cells is other than the first data" stated on line 9-11, 16-18, 23-25 of claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### ***Conclusion***

8 The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Tsukude (5812490) and Amano et al (5894448) disclose a memory device.

9. When responding to the office action, Applicants' are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

10. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (703) 306-5731. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The examiner's supervisor, David Elms, can be reached on (703) 308-4910. The fax phone number for this Group is (703) 308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0956.



**C. Yoha**

September 2003



Connie C. Yoha

Patent Examiner

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